A system could be developed to trap and instantly kill the animals, processing the meat and by-products and giving the elk to those with a Wyoming game tag or to the needy. Some advantages to this could be that the herd could be selectively culled. Slaughterhouse operations usually mean herding and penning animals. This is harsh on wild animals and the public probably would not support this. Furthermore, there could be undesirable consequences to the herd behavior. It is, after all, the magnificence of this great herd in its migrations and breeding rituals, that make it a national treasure. Maximum manipulation by humans may not be publicly acceptable or ecologically responsible.

Another alternative would be trapping and transporting animals to other locations. This is time consuming and is very stressful on wild animals. Logistically, it is an expensive operation to carry out and not a simple one. The biggest consideration here is whether or not these areas really need more elk. Most areas with elk populations already have all the elk they can support considering the constraints of limited winter range and the fact that these areas have elk populations already controlled in size by hunting.

Other elk herds in
Wyoming are also fed in
winter due to diminished
winter range. Also, diseases
such as brucellosis are a
consideration. Diseased

animals may not be transported out of the immediate herd area without

 $Bull\ elk$

in fall.

extensive disease testing and controls. Here the economical interests of special interests come into the picture. Does the American public wish to subject this herd to total manipulation, or to maintain at least some semblance of naturalness wherever possible?

Predation by humans and wild animals, besides weather and climate fluctuations which are historic population control factors, come the closest to the prehistoric way the herd size was controlled. Still, prehistorically, predation never had that much effect on population control of such great herds.



Wolves prey on elk.

The reintroduction of wolves into Yellowstone National Park and their expansion throughout the area will have an effect on ungulate populations. Because the Yellowstone area, including Jackson

Hole, is not an intact ecosystem and considering the controversies involved, the concept of wolves playing a major role in herd reduction is complicated biologically and politically. Wolves will have some effect on elk populations and will contribute to the health of the herds by reducing the young, old, sick, injured or crippled animals. Still, predation may not contribute enough toward total elk population control.

Birth control methods are not currently viable for such large herds of wild animals for various reasons including extreme expense, large amount of time/personnel required to administer, manipulation of animals and infective over the long term.

Benefits of Hunting

Hunting by humans has realistic economic benefits to the state and local economy, including motels, restaurant, service stations, sports suppliers, outfitters and guides. Hunting also provides funds to the Wyoming Game and Fish Department for its work with the elk and other wildlife (including nongame species).

In addition, if hunting is strictly controlled, conducted in a safe, ethical manner and does not endanger the populations and species hunted, hunting is a valid activity. It provides recreational, economic, and ecological benefits while yielding the hunter a wholesome quantity of meat. If one agrees that mass starvation is unacceptable and that the herd size must be managed, then hunting appears to be a reasonable way to accomplish it.

For more information contact:

National Elk Refuge 307/733-9212 http://www.fws.gov/nationalelkrefuge/





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U.S. Fish &Wildlife Service

National Elk Refuge Hunting

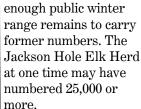


Cooperative Elk hunting has occurred Management throughout Jackson Hole as long as people have inhabited the valley. Today, the population objective, set by the state of Wyoming, for the Jackson Hole Elk Herd is 11.000 with an annual harvest of approximately 2,000 elk. On the National Elk Refuge, an average of 200 elk are harvested each year.

> Agencies involved with elk management work together to preserve this magnificent migratory herd. Hunting is conducted on all public lands with each agency playing a role in total herd management. In this way, hunting pressure is dispersed over a greater geographic area.

Limited Winter Range

The problem with the elk population size is not that the elk have exceeded their range carrying capacity, but rather, not



Humans havedisplacedwintering elk.

Today, with increased development of Jackson Hole and the loss of 75% of the herd's winter range, the Refuge maintains a mere 25 % (24,000 acres) of historic winter range, yet supports over 50% of the Jackson Elk Herd. The remainder winter on lands adjacent to the National Elk Refuge on nearby park, forest or state lands.

Die-offs of up to 10,000 elk during winters in the late 1800's and early 1900's led to public concern for the elk and the creation of the Refuge. Complicating the situation was the competition between elk and domestic livestock for the valley's winter hay supplies.



Starving $elk\ created$ publicconcern.

Many elk starved to death because of the lack of once available food. Large dieoffs were unacceptable to the public then and would be unacceptable today. One basic question, then, is

what is the best way of managing herd size?

Since 1912, the average yearly wintering population of elk on feed on the Refuge has been approximately 7,500. Our management goal in working with the Wyoming Game and Fish Department is a maximum winter population of 7,500 animals on the Refuge. This is consistent with historical, political, economical, social, aesthetic and biological realities.

The herd is reproductively dynamic and has an average 20% annual rate of increase. Because the herd's large summer range is near its prehistoric size, the elk do well, and females leave the summer range in good condition. In winter, while females are carrying calves, elk are supplementally fed most winters which keeps the population with a 1-2% mortality rate. If left uncontrolled, the herd size would grow rapidly.

The summer range, being almost "intact," could support a herd much larger than the present size. However, a healthy ecosystem breaks down with a lack of winter habitat.

Tool

Hunting as a Hunting is a management tool used Management to reduce elk numbers so their population is more compatible with limited winter range.

> Also, hunting on the Refuge balances the reduction of elk from different herd segments. For example, due to hunting closures, the Teton herd segment, elk summering in the vast area of Grand Teton National Park west of the Snake River, can only be reduced when they move onto the southern end of the Park and when they move on to the Refuge. These animals move through no other hunted area as they migrate from the park to Refuge.



Hunters on the National ElkRefuge.

This is important for the overall management of all herd segments, so one segment does not grow unlimited while other segments are reduced annually. The Elk

Reduction Program in Grand Teton National Park is an integral part of a long-range plan to restore historical elk migrations and distribution habits outside the park. Only those park lands absolutely essential to the program are presently open to hunting.

On the Refuge, hunting has also been a management tool to prevent a large herd of summering elk to build on Refuge lands. This method helps to save critical winter range forage for the migratory herd's use in winter.

Refuge Elk Harvest

Year	Number
2005	150
2004	166
2003	357
2002	213
2001	308
2000	284
Average	265

to Hunting

Alternatives To present a balanced picture of the complex elk management situation, alternatives to hunting must be explored. The population could be allowed to grow without hunting, crowd the elk onto the Refuge and outlying winter areas and increase supplemental feeding. But there is a limit to the public's ability to feed an every growing herd. And, if the population was allowed to grow without hunting and without feeding, there would be inevitable consequences.

> Concentration of the elk would cause additional stresses and problems through crowding, transmission of diseases, destruction of critical winter range, damage and depredation on private lands, and ultimately starvation. This alternative may not be economically or politically realistic or humane.